From:	POULSEN Mike
To:	Eric Blischke/R10/USEPA/US@EPA
Cc:	Burt Shephard/R10/USEPA/US@EPA; danadavoli@avvanta.com; PETERSON Jenn L; Dana Davoli/R10/USEPA/US@EPA
Subject:	RE: Bass Lengths
Date:	11/02/2007 09:41 AM

Eric -

We have multiple objectives with the Round 3 fish, and there is not one best composite approach that will optimize all the objectives. Based on our stated data quality objectives, I think the main goal is data to evaluate fish themselves (including in the foodweb model). I think this is what Jennifer is addressing. Another goal would be the eco risk assessment dealing with consumers of fish (not the fish themselves). Birds and mammals may target smaller fish, and would certainly keep the smaller fish if caught (I don't think otters practice catch-and-release). In that case, using the larger fish might be inappropriate. However, humans are selective, particularly if they have a 5 fish limit. They will want to keep the larger fish, and therefore may selectively release smaller fish. I don't know the size range of fish actually caught, kept, and consumed by humans, but then again, neither does the LWG. The 355 mm limit was an LWG judgment before Round 1 sampling began. I now expect that larger fish are being caught. Perhaps not, but in both Round 1 and Round 3, larger fish were caught, and I don't have any proof that a typical catch would not include fish larger than 355. From an eco standpoint of protecting the fish, and from a human health standpoint, I recommend including the larger fish in the composites.

Dana sent me your latest fish composite plan. If we do end up tossing some of the larger fish, here are a few thoughts:

4E - This is probably OK the way you proposed it. In my alternate approach, I omitted 351 because that brought the ratio up from 0.71 to 0.78.

4W - You kept 356. If you follow the rule with 355 as a limit, then omitting the 356 sample raises the ratio from 0.71 to 0.78. Might be worth doing.

7E - You kept 357. I'm not sure your justification, but if you remove it, the ratio drops to 0.74.

9W - You omit the scaled 351 fish. The scaling doesn't seem important to me, so I would keep it. Anybody else want to comment on whether we should include a scaled fish in the composite?

11W - You kept 369 after omitting 371. I would keep both or toss both.

- Mike

-----Original Message-----
From: Blischke.Eric@epamail.epa.gov
[mailto:Blischke.Eric@epamail.epa.gov]
Sent: Thursday, November 01, 2007 4:45 PM
To: Davoli.Dana@epamail.epa.gov
Cc: Shephard.Burt@epamail.epa.gov; danadavoli@avvanta.com; PETERSON Jenn L; POULSEN Mike
Subject: Re: Bass Lengths

I agree that they may be throwing back smaller fish and that larger fish can kept. However, of the 191 fish that were captured, only 6 exceed 380 mm in length while 55 are less than 225 mm. Since it appears that there is no minimum size requirement for smallmouth bass, it seems that by not including fish below 225 mm in length, we are accounting for the throw back phenomena.

Eric

Dana Davoli/R10/USEPA/US
11/01/2007 04:05 PM

To: Eric Blischke/R10/USEPA/US@EPA
cc: Burt Shephard/R10/USEPA/US@EPA, Jennifer L Peterson <PETERSON.Jenn@deq.state.or.us>, POULSEN Mike <POULSEN.Mike@deq.state.or.us>, danadavoli@avvanta.com
Subject: Re: Bass Lengths(Document link: Eric Blischke)

I agree that a lot of smaller fish were caught and thrown back. But I think an important point is that fishermen can only keep 5 bass per day, 3 of which can be over 394 mm. They may be throwing back the small ones and keeping the larger ones for consumption. The other issue is eco. I would assume that you want estimates of some of the higher concentrations in fish to compare to the body burden TRVs. The best thing would to analyze individual fish or multiple size ranges, but since we aren't doing that, I would think we would want to have the larger fish in the composites. We are attempting to meet multiple DQOs with the same samples....the compositing should consider that.

I will check my e-mail at home (danadavoli@avvanta.com) to call me on my cell if you want to talk or review anything (b) (6)

Eric Blischke/R10/USEPA/US
11/01/2007 03:48 PM

To: Burt Shephard/R10/USEPA/US@EPA, Dana Davoli/R10/USEPA/US@EPA, POULSEN Mike <POULSEN.Mike@deq.state.or.us>, Jennifer L Peterson <PETERSON.Jenn@deq.state.or.us>
cc:
Subject: Bass Lengths

Ok - I looked at the bass samples collected and ran some statistics. The data set includes bass that were captured and released as well as those to be included in the compositing scheme. There were a number that were identified as "< 225" I used a length of 225 for these fish which should be conservative. The data set is summarized in the attached data set. Some statistics:

Mean = 273.5 mm
95% UCL of Mean = 280.6 mm
95% of distribution = 372.5 mm
Minimum = 150 mm
Max = 530 mm

I just have to say that I am concerned about biasing our composite data set on the high end. I believe that the 190 or so fish collected by Bill Egan and members of the bass and panfishers club represents a good distribution of what a typical fisher would capture. I have no idea about what fiish may be kept vs. thrown back.

If we are trying to come up with a "good estimate of the mean," it seems to me that we should be targeting a mean length of 280.6 mm. Ideally, we should include a range of fish lengths that reflects the range that are caught with a mean close to the 95% UCL of the mean. However, the 0.75 rule sort of forbids that. Let me know what you think.

Eric

(See attached file: 3BBassStat.xls)